IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Group Art Unit: 2665
Kenneth MARGON	Examiner: Steven H. D. NGUYEN
Serial No.: 09/482,054	Customer No.: 36183
Filed: January 13, 2000	
Confirmation No.: 6497	
For: SYSTEM AND METHOD FOR SINGLE-POINT TO FIXED-MULTIPOINT DATA COMMUNICATION	

APPEAL BRIEF

Table of Contents
(CONTINUED)

PAGE

Table of Contents
(CONTINUED)

PAGE

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APPEAL BRIEF

In response to the Office Action mailed April 19, 2005, finally rejecting pending claims 1-18, 20-45, 47-61, 64-71, 74-77, 80, and 81, Appellant respectfully requests that the Board of Patent Appeals and Interferences reconsider and withdraw the rejections of record, and allow the pending claims, which are attached hereto as Appendix A.

I. REAL PARTY IN INTEREST

The real party in interest is Cape Range Wireless, Inc. (formerly named Arcadian Wireless, Inc.), which is the Assignee of the above-referenced application.

II. RELATED APPEALS AND INTERFERENCES

To the best of Appellant's knowledge, there are no related Appeals or Interferences.

III. STATUS OF CLAIMS

Claims 1-18, 20-45, 47-61, 64-71, 74-77, 80, and 81 are pending in this application. Claims 19, 46, 62, 63, 72, 73, 78, and 79 have been canceled previously. The rejections of 1-18, 20-45, 47-61, 64-71, 74-77, 80, and 81 are appealed.

IV. STATUS OF AMENDMENTS

No amendments to the claims have been filed subsequent to the final rejection in the Office Action dated April 19, 2005.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is a data communication system having a base station and a plurality of remote stations. In operation, the base station transmits data packets to the remote stations via a forward channel at a predetermined time interval and the remote stations transmit data packets to the base station via a reverse channel at a subsequent predetermined time interval for every communications cycle. Before transmitting on the reverse channel, each of the remote stations listens to (monitors) the reverse channel to ascertain whether any other remote station is transmitting. The remote stations monitor the reverse channel in sequential order at exclusively assigned times during a clear channel assessment interval. A remote station transmits data only when it determines that the reverse channel is clear.

The foregoing overview is described in detail with reference to the figures and specification as follows. Referring to Fig. 1, the present invention comprises a base station 102 and a plurality of remote stations 104. Specification, p. 5, ll. 19-23. Communication from and to base station 102 and each of the remote stations 104 is provided over a forward channel 106 and a reverse channel 108, respectively. *Id.* The communication between base station 102 and each remote station 104 can be conducted in half- or full-duplex embodiments. *Id.* at p. 5, ll. 30-31; Fig. 2A (half-duplex) and Fig. 2B (full-duplex). Upon the expiration of the predetermined time allotted for forward channel 106,

each remote station 104 enters a predetermined clear channel assessment interval 202 phase and listens to the reverse channel 108. *Id.* at p. 7, ll. 7-10. During this time, each remote station 104 listens to the reverse channel 108 to ascertain whether other remote stations 104 are transmitting. *Id.*

In one embodiment of the invention, the clear channel assessment interval 202 is divided into periods of time, *i.e.*, dwell times (DT), each of which is assigned to one of a plurality of remote stations 104. *Id.* at p. 8, l. 29 to p. 9, l. 28. Referring to Fig. 3, there can be "n" DT periods (e.g., DT_1 302, DT_2 304, and DT_n 306). *Id.* In general, each remote station 104 is assigned a particular DT period and listening occurs in a serial manner. *Id.* at p. 9, ll. 1-2. During the clear channel assessment interval 202, each remote station 104 waits until its assigned DT to listen to the reverse channel 108, and if during its DT the channel is clear, that station can transmit data. *Id.* at p. 9, ll. 1-5. For example, a first remote station with DT 302 listens first to the reverse channel 108. *Id.* at p. 9, ll. 5-7. After the expiration of DT 302, a second remote station listens to the reverse channel 108 for the period of DT_2 304. *Id.* at p. 9, ll. 7-8. An "n^{th}" remote station waits until the beginning of DT_n 306 to listen to the reverse channel 108 for the DT period. *Id.* at p. 9, ll. 8-10. A remote station that has data to send to base station 102 does so only when the remote station has listened to the reverse channel 108, at its designated DT during a predetermined reverse channel time interval, and has ascertained that no other remote station 104 is transmitting (i.e., a clear channel exists). *Id.* at p. 9, ll. 10-12.

Each remote station 104 thereby determines whether or not to transmit data (by monitoring the reverse channel 108) without requiring the base station 102 to broker or provide access to the reverse channel 108 among remote stations 104. *Id.* at p. 7, ll. 20-24.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

There are thirteen (13) grounds of rejection to be reviewed on appeal:

(1) Whether claims 1, 15-18, 24, 32, 42-45, 50, 55, 66, 68, 69, 74, 76, and 80 are patentable, under 35 U.S.C. § 102(b), over U.K. Patent Application No. 2,293,943 to Kashi *et al.* ("Haim").[1]

(2) Whether claims 2, 3, 5-7, 25, 33-35, 40, 56, 57, 61, 70, 71, and 77 are patentable, under 35 U.S.C. § 103(a), over Haim.

(3) Whether claims 1-3, 5-7, 15-18, 24, 25, 32-35, 40, 42-45, 50, 55-57, 61, 66, 68-71, 74, 76, 77, and 80 are patentable, under 35 U.S.C. § 103(a), over U.S. Patent No. 5,682,604 to Kashi *et al.* ("Kashi")[2] in view of U.S. Patent No. 5,572,546 to Serfaty.

(4) Whether claims 4, 26-29, 41, 51, 52, 67, 75, and 81 are patentable, under 35 U.S.C. § 103(a), over Kashi and Serfaty, and further in view of U.S. Patent No. 5,726,984 to Kubler.

(5) Whether claims 8-11, 36, 37, and 60 are patentable, under 35 U.S.C. § 103(a), over Kashi and Serfaty, and further in view of U.S. Patent No. 5,751,971 to Dobbins.

(6) Whether claims 12-14, 38, 39, 58, and 59 are patentable, under 35 U.S.C. § 103(a), over Kashi and Serfaty, and further in view of U.S. Patent No. 6,147,986 to Orsic.

(7) Whether claims 20-22, 30, 31, 47, 48, 53, 54, and 64 are patentable, under 35 U.S.C. § 103(a), over Kashi and Serfaty, and further in view of U.S. Patent No. 6,272,117 to Choi.

(8) Whether claims 23, 49, and 65 are patentable, under 35 U.S.C. § 103(a), over Kashi and Serfaty, and further in view of U.S. Patent No. 6,484,027 to Mauney.

(9) Whether claims 4, 26-29, 41, 51, 52, 67, 75, and 81 are patentable, under 35 U.S.C. § 103(a), over Haim in view of Kubler.

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[1] The Examiner refers to this reference as "Haim" despite the fact that the inventor's full name is Haim Kashi.

2 Although the Examiner refers to this reference by a different name, the specification of Haim Kashi's U.S. Patent No. 5,682,604 is identical, word-for-word, to that of Haim Kashi's corresponding U.K. Patent Application No. 2,293,943. Therefore, "Haim" and "Kashi" are the very same reference. Nonetheless, in order to maintain consistency, Appellant will use the Examiner's different citations in this Brief to refer to these "two" references.

(10) Whether claims 8-11, 36, 37, and 60 are patentable, under 35 U.S.C. § 103(a), over Haim in view of Dobbins.

(11) Whether claims 12-14, 38, 39, 58, and 59 are patentable, under 35 U.S.C. § 103(a), over Haim in view of Orsic.

(12) Whether claims 20-22, 30, 31, 47, 48, 53, 54, and 64 are patentable, under 35 U.S.C. § 103(a), over Haim in view of Choi.

(13) Whether claims 23, 49, and 65 are patentable, under 35 U.S.C. § 103(a), over Haim in view of Mauney.

VII. ARGUMENT

The two primary "references," Haim and Kashi, which the Examiner relies upon in all of the rejections, are essentially one reference as the two references provide the very same disclosure word-for-word. In fact, the first named co-inventor of "Haim" is Haim Kashi, the same individual and first named co-inventor of "Kashi."

Regardless of the particular citation, Haim Kashi's one disclosure, either taken alone or in combination with any of the cited secondary prior art, fails to teach or suggest all recited claim limitations such as, but not limited to "said forward channel signal is provided during a predetermined forward channel interval and said reverse channel signal is provided during a predetermined reverse channel interval" as recited or similarly recited in all the independent claims (*i.e.*, claims 1, 32, 55, 68, 69, and 76)

Additionally, the Examiner's various proposed combinations and/or modifications of references are improper because there is absolutely no legitimate motivation to combine together or modify the various elements relied upon to yield the claimed invention. Moreover, "Haim" or "Kashi" teaches away from such modifications/combinations. Furthermore, the proposed

combinations/modifications would change the principle of operation of the techniques disclosed in "Haim" or "Kashi."

A. Summary Of The Rejections And The Prior Art Relied Upon In Rejecting The Pending Claims

1. The Anticipation Rejection Of Claims 1, 15-18, 24, 32, 42-45, 50, 55, 66, 68, 69, 74, 76, And 80 Over Haim

The Office Action dated April 19, 2005 ("the Office Action"), rejects pending claims 1, 15-18, 24, 32, 42-45, 50, 55, 66, 68, 69, 74, 76, and 80 under 35 U.S.C. § 102(b), as anticipated by U.K. Patent Application No. 2,293,943 to Haim. The Office Action alleges that the admitted prior art in Haim discloses all the limitations recited in these claims. Office Action at pages 2 and 11.

2. The Obviousness Rejection Of Claims 2, 3, 5-7, 25, 33-35, 40, 56, 57, 61, 70, 71, And 77 Over Haim

The Office Action rejects pending claims 2, 3, 5-7, 25, 33-35, 40, 56, 57, 61, 70, 71, and 77 under 35 U.S.C. § 103(a), as unpatentable over Haim. Recognizing that "Haim does not fully disclose the claimed invention in his admitted prior art," the Examiner asserts that Haim discloses certain elements in the detailed description of Haim. *Id.* at page 4. The Examiner then opines that "it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method for encoding the information such packet [*sic*] having a priority and address before transmitting between the central and remote units as disclosed by Haim's improved system into Haim's admitted prior arts [*sic*]."[3] *Id.* "The motivation would have been to provide a security [*sic*] for transmitted data." *Id.*

3. The Obviousness Rejection Of Claims 1-3, 5-7, 15-18, 24, 25, 32-35, 40, 42-45, 50, 55-57, 61, 66, 68-71, 74, 76, 77, And 80 Over Kashi In View Of Serfaty

The Office Action rejects pending claims 1-3, 5-7, 15-18, 24, 25, 32-35, 40, 42-45, 50, 55-57, 61, 66, 68-71, 74, 76, 77, and 80 under 35 U.S.C. § 103(a), as unpatentable over Kashi in view of

[3] As with numerous other passages, the grammar and sentence structure set forth here in the Office Action makes it difficult, if not impossible, for Appellant to adequately understand the Examiner's line of reasoning.

Serfaty. Recognizing that "Kashi fails to disclose a method and system for dividing a clear access interval into a plurality of time slot wherein each time slot is assigned to each mobile unit,"[4] the Examiner attempts to cure such a deficiency by introducing Serfaty as allegedly disclosing a "system which [includes an] upstream and downstream channel wherein the downstream channel and sensing time interval which is divided into a plurality of time slots wherein each mobile is assigned a time slot for sensing if the uplink channel is free in order to transmit the reverse signal to the receiving station." *Id.* at page 5 (citations omitted). The Examiner then asserts that since "Kashi suggests that each mobile station has a different time such time slot to sense free channel before transmitting a reverse signal," "it would have been obvious to one of ordinary skill in the art at the time of the invention was made [*sic*] to apply a method and system for dividing a sensing interval time into a plurality of time slots wherein each time slot assigned to each mobile unit as disclosed by Serfaty's system and method into Kashi's system and method." *Id.* at page 5. "The motivation would have been to reduce [collisions] and improve the throughput of the system." *Id.*

4. The Obviousness Rejection Of Claims 4, 26-29, 41, 51, 52, 67, 75, And 81 Over Kashi And Serfaty, In Further View Of Kubler

Recognizing the deficiencies of the combination of Kashi and Serfaty with respect to claims 4, 26-29, 41, 51, 52, 67, 75, and 81, the Office Action additionally relies on Kubler to reject these claims.

The Office Action acknowledges that "Kashi and Serfaty do not fully disclose the data packet including a digitized voice and data." *Id.* at page 6. The Office Action attempts to cure this additional deficiency by introducing Kubler as allegedly disclosing "a data packet including digitized

[4] The Examiner apparently is contending that the Detailed Description of Kashi fails to disclose certain elements, whereas the admitted prior art of Haim, i.e., Kashi, does disclose a portion of these elements. *See* Office Action at page 11 ("The references include two parts such as prior art which discloses a step of assigning a time slot for each terminal to monitor the reverse channel and the improved [*sic*] of the prior art (summary of invention and detailed description) which does not disclose this step. Therefore, the examiner use the teaching of prior art for 102 rejection and suggestion in the 103 rejection. Therefore, the rejections are not conflict [*sic*] with each other.").

voice and data and [*sic*] a half, full duplex and the signals are transmitted via electrical or optical medium." *Id.* (citations omitted). The Examiner then opines:

> Since a packet that includes voice and data is well known and expected in the art at the time of invention was made [*sic*]. Since, both the concept and the advantages of using half and full duplex for transmitting voice and data packet in a wireless and wireline system well known [*sic*] and expected in the art. Therefore, it would have been obvious to apply the data packets [*sic*] including the digitized voice and data for transmitting [*sic*] between the base and remote station as disclosed by Kubler into the system and method of Kashi and Serfaty. The motivation would have been to integrate a wireless network with a wireline network such as Internet and turn the Internet into a reliable telecommunication network.

5. The Obviousness Rejection Of Claims 8-11, 36, 37, And 60 Over Kashi And Serfaty, And Further In View Of Dobbins

Recognizing the deficiencies of the combination of Kashi and Serfaty with respect to claims 8-11, 36, 37, and 60, the Office Action additionally relies on Dobbins to reject these claims.

The Office Action acknowledges that "Kashi and Serfaty do not fully disclose an address is broadcast [*sic*], a semi broadcast [*sic*], IP [*sic*]." *Id.* In an attempt to cure such a deficiency, Dobbins is introduced as disclosing "a broadcast, group and Internet address." *Id.* Therefore, the Office Action contends that "[s]ince both the concept and advantages of using broadcast, group and Internet address in a wireless system is well known and expected in the art" "it would have been obvious to one of ordinary skill in the art at the time [that] the invention was made to assign an address to a remote unit in order to route the packets in the system as disclosed by Dobbins into Kashi and Serfaty." *Id.* at p. 7. "The motivation would have been to obtain an efficiency [*sic*] system." *Id.*

6. The Obviousness Rejection Of Claims 12-14, 38, 39, 58, And 59 Over Kashi And Serfaty, And Further In View Of Orsic

Recognizing the deficiencies of the combination of Kashi and Serfaty with respect to claims 12-14, 38, 39, 58, and 59, the Office Action additionally relies on Orsic to reject these claims.

The Office Action acknowledges that "Kashi and Serfaty do not fully disclose the claimed invention." *Id.* In an attempt to cure such a deficiency, Orsic is introduced as disclosing "a method

of assigning a first remote station address from a first set of addresses in a first zone 'cell or sector' and a second remote station address from a second set of addresses in a second zone 'cell or sector'; wherein set of addresses [*sic*] form an Internet subnetwork." *Id.* Therefore, the Office Action contends that "[s]ince both the concept and the advantages of assigning a different address to each remote to different zone [*sic*] having an Internet subnetwork are well known and expected in the art" "it would have been obvious to one of ordinary skill in the art at the time [that] the invention was made to assign a different address to each remote to different zone [*sic*] having an Internet subnetwork as disclosed by Orsic into the system of Kashi and Serfaty." "The motivation would have been to easily locate the remote station in the zones." *Id.*

7. The Obviousness Rejection Of Claims 20-22, 30, 31, 47, 48, 53, 54, And 64 Over Kashi And Serfaty, And Further In View Of Choi

Recognizing the deficiencies of the combination of Kashi and Serfaty with respect to claims 20-22, 30, 31, 47, 48, 53, 54, and 64, the Office Action additionally relies on Choi to reject these claims.

The Office Action acknowledges that "Kashi and Serfaty do not fully disclose the claimed invention." *Id.* at p. 8. In an attempt to cure such a deficiency, Choi is introduced as disclosing "a method of transmitting a control packet for synchronizing the base station and remote station and a guard time for the channels." *Id.* Therefore, the Office Action contends that "[s]ince both the concept and advantages of using guard time [*sic*] and control packet [*sic*] for synchronization in a wireless system are well known and expected in the art" "it would have been obvious to one of ordinary skill in the art at the time [that] the invention was made to synchronize the base station and remote station by broadcasting a control packet to the mobile as disclosed by Choi into the system of Kashi and Serfaty." *Id.* "The motivation would have been to adjust a clock of the remote station to coincide with the base station." *Id.*

8. The Obviousness Rejection Of Claims 23, 49, And 65 Over Kashi And Serfaty, And Further In View Of Mauney

Recognizing the deficiencies of the combination of Kashi and Serfaty with respect to claims 23, 49, and 65, the Office Action additionally relies on Mauney to reject these claims.

The Office Action acknowledges that "Kashi [*sic*] does not fully disclose a system being used in IPMA environment." *Id* In an attempt to cure such a deficiency, Mauney is introduced as disclosing "a wireless system which includes Internet protocol multiple access." *Id.* Therefore, the Office Action contends that "[s]ince, both the concept and advantages of using Internet protocol in a wireless system is well known and expected in the art" "it would have been obvious to one of ordinary skill in the art at the time of the invention was apply [*sic*] IP into a multiple access system as disclosed by Mauney into the system of Kashi and Serfaty." *Id.* "The motivation would have been to reduce the cost of telephone [*sic*] call." *Id.*

9. The Obviousness Rejection Of Claims 4, 26-29, 41, 51, 52, 67, 75, And 81 Over Haim In View Of Kubler

Recognizing the deficiencies of the combination of Haim with respect to claims 4, 26-29, 41, 51, 52, 67, 75, and 81, the Office Action additionally relies on Kubler to reject these claims.

The Office Action acknowledges that "Haim does not fully disclose the data packet including a digitized voice and data." *Id.* at page 9. The Office Action attempts to cure this additional deficiency by introducing Kubler as allegedly disclosing "a data packet including digitized voice and data and [*sic*] a half, full duplex [*sic*] and the signals are transmitted via electrical or optical medium." *Id.* (citations omitted). The Examiner then opines:

> Since a packet that includes voice and data is well known and expected in the art at the time of invention was made [*sic*]. Since, both the concept and the advantages of using half and full duplex for transmitting voice and data packet in a wireless and wire line system well known [*sic*] and expected in the art. Therefore, it would have been obvious to apply the data packets [*sic*] including the digitized voice and data for transmitting [*sic*] between the base and remote station as disclosed by Kubler into the system and method of Haim. The motivation would have been to integrate a wireless network with a wire line network such as Internet and turn the Internet into a reliable telecommunication network.

10. The Obviousness Rejection Of Claims 8-11, 36, 37, And 60 Over Haim In View Of Dobbins

Recognizing the deficiencies of the combination of Haim with respect to claims 8-11, 36, 37, and 60, the Office Action additionally relies on Dobbins to reject these claims.

The Office Action acknowledges that "Haim does not fully disclose an address is broadcast [*sic*], a semi broadcast [*sic*], IP [*sic*]." *Id.* In an attempt to cure such a deficiency, Dobbins is introduced as disclosing "a broadcast, group and Internet address." *Id.* Therefore, the Office Action contends that "[s]ince both the concept and advantages of using broadcast, group and Internet address in a wireless system is well known and expected in the art" "it would have been obvious to one of ordinary skill in the art at the time [that] the invention was made to assign an address to a remote unit in order to route the packets in the system as disclosed by Dobbins into Haim." *Id.* at p. 10. "The motivation would have been to obtain an efficiency [*sic*] system." *Id.*

11. The Obviousness Rejection Of Claims 12-14, 38, 39, 58, And 59 Over Haim In View Of Orsic

Recognizing the deficiencies of the combination of Haim with respect to claims 12-14, 38, 39, 58, and 59, the Office Action additionally relies on Orsic to reject these claims.

The Office Action acknowledges that "Haim does not fully disclose the claimed invention." *Id.* In an attempt to cure such a deficiency, Orsic is introduced as disclosing "a method of assigning a first remote station address from a first set of addresses in a first zone 'cell or sector' and a second remote station address from a second set of addresses in a second zone 'cell or sector'; wherein set of addresses [*sic*] form an Internet subnetwork." *Id.* Therefore, the Office Action contends that "[s]ince both the concept and the advantages of assigning a different address to each remote to different zone [*sic*] having an Internet subnetwork are well known and expected in the art" "it would have been obvious to one of ordinary skill in the art at the time [that] the invention was made to assign a different address to each remote to different zone [*sic*] having an Internet subnetwork as

disclosed by Orsic into the system of Haim." "The motivation would have been to easily locate the remote station in the zones." *Id.*

12. The Obviousness Rejection Of Claims 20-22, 30, 31, 47, 48, 53, 54, And 64 Over Haim In View Of Choi

Recognizing the deficiencies of the combination of Haim with respect to claims 20-22, 30, 31, 47, 48, 53, 54, and 64, the Office Action additionally relies on Choi to reject these claims.

The Office Action acknowledges that "Haim does not fully disclose the claimed invention." *Id.* In an attempt to cure such a deficiency, Choi is introduced as disclosing "a method of transmitting a control packet for synchronizing the base station and remote station and a guard time for the channels." *Id.* Therefore, the Office Action contends that "[s]ince both the concept and advantages of using guard time [*sic*] and control packet [*sic*] for synchronization in a wireless system are well known and expected in the art" "it would have been obvious to one of ordinary skill in the art at the time [that] the invention was made to synchronize the base station and remote station by broadcasting a control packet to the mobile as disclosed by Choi into the system of Haim." *Id.* at page 11. "The motivation would have been to adjust a clock of the remote station to coincide with the base station." *Id.*

13. The Obviousness Rejection Of Claims 23, 49, And 65 Over Haim In View Of Mauney

Recognizing the deficiencies of the combination of Haim with respect to claims 23, 49, and 65, the Office Action additionally relies on Mauney to reject these claims.

The Office Action acknowledges that "Haim does not fully disclose a system being used in IPMA environment." *Id* In an attempt to cure such a deficiency, Mauney is introduced as disclosing "a wireless system which includes Internet protocol multiple access." *Id.* Therefore, the Office Action contends that "[s]ince, both the concept and advantages of using Internet protocol in a wireless system is well known and expected in the art" "it would have been obvious to one of ordinary skill in the art at the time of the invention was apply [*sic*] IP into a multiple access system as

disclosed by Mauney into the system of Haim." *Id.* "The motivation would have been to reduce the cost of telephone [*sic*] call." *Id.*

14. Haim (i.e., Haim Kashi's UK Patent Application No. 2,293,943)[5]

The Examiner attempts to rely on the prior art section of Haim, so only that section of Haim will be discussed here. *See id.* at page 12 ("Therefore, the examiner use the teaching of prior art [*sic*] for 102 rejection and suggestion [*sic*] in the 103 rejection. Therefore, the rejections are not conflict [*sic*] with each other.").

Referring to the background section, Haim discusses a supervisory control and acquisition-of-data (SCADA) system, in which remote terminal units (RTUs) are interrogated or "polled" by a central unit. *See* Haim, page 1, lines 14-16. There are two principal forms of interrogation: specific interrogation and global interrogation. *Id.* at page 1, lines 22-23. In global interrogation, it is typical for each RTU to have a different time to sense whether the channel is free before transmitting a reply. The highest priority RTU is allocated the shortest time for reply. Thus, when the channel becomes free after the central unit has transmitted to the global interrogation request, it will be the highest priority unit that is first to access the channel, after which time the next unit waits a longer period to sense free channel before it transmits. In this manner, there is an orderly sequence for response from all the RTU's. *Id.* at page 1, lines 27-34.

Yet, Haim admits that global interrogation is wasteful of channel time because, for example, the tenth unit to responds to a global interrogation request waits 10 "slots" (ie. 10 times the basic delay time) before accessing the channel. *Id.* at page 2, lines 8-11. This channel time is unused. *Id.* at page 2, line 11. This is particularly critical in a radio communications system, where the radio channel capacity is a valuable and scare resource. *Id.* at page 2, lines 11-13.

[5] Appellant again notes that "Haim" and "Kashi" are the very same reference in an attempt to avoid any confusion.

15. Kashi (i.e., Haim Kashi's U.S. Patent No. 5,682,604)

Kashi (i.e., Haim Kashi's U.S. Patent No. 5,682,604) presents the identical disclosure word-for-word as Haim (i.e., Haim Kashi's U.K. Application No. 2,293,943). In fact, the first named co-inventor "Haim" of the '943 U.K. Application is Haim Kashi, the same individual and first named co-inventor of the '604 patent. Moreover, the inventive entities and Assignees between these two references are identical. Although these two references do not cross-reference one another, they are clearly one and the same from no more than a cursory review.

Referring to the Detailed Description section, Kashi discloses a communications system having a base station 10 and a number of remote terminal units (RTUs), *e.g.*, RTUs 11, 12, and 13 (numbered RTU1, RTU2, and RTU3). *See* Kashi Fig. 2 and col. 3, ll.44-52. Central base station 10 and RTUs 11, 12, and 13 transmit and receive on a channel frequency (frequency 1). *Id.* In order for a RTU in Kashi's system to determine that the channel is clear, and hence can transmit information on the channel, a priority algorithm (as depicted in Fig. 5) employing predetermined RTU priority parameters (ID numbers) is implemented. *Id.* at abstract and col. 4, ll. 38-39. In operation, when one of the RTUs transmits, it includes its ID number in the start of its transmission. *Id.* at col. 4, ll. 39-40. All other non-transmitting RTUs listen and extract the ID number of the transmitting RTU. *Id.* at col. 4, ll. 56-58. Each non-transmitting RTU compares the ID number of the transmitting RTU to its own predetermined ID number to calculate a delay period in which the RTU is to wait before again accessing the channel (*i.e.*, determining whether the channel is clear) at a later time. *Id.* at col. 4, ll. 59-63. After the expiration of its calculated delay period, each RTU listens to the channel and if it is clear, begins transmitting data (along with its ID number). *Id.* at col. 5, ll. 60-63. If the channel is still not clear, the RTU repeats the above calculation and listening steps. *See Id.* at Fig. 5.

Kashi's RTUs monitor and assess the reverse channel at varying unassigned times, a portion of which are employed by more than one RTU and are all calculated based on a priority number of

the RTU transmitting that cycle. *See Id.* at column 3, lines 28-34 and Figs. 6 and 7. As such, the time at which channel monitoring and assessment begins at a Kashi RTU is at least dependent on or determined by the expiration, *i.e.*, duration, of the central unit transmission and the priority values received from other RTUs attempting to transmit.

16. Serfaty

Serfaty discloses an acknowledgment interval featuring the use of time slots in which a unit waits to "see" that the channel is free to send an acknowledgement. Serfaty, col. 5, ll. 9-32. This acknowledgment interval is triggered by the transmission of a first unit (unit A). *See id.* at col. 4, 36-43. Serfaty does not disclose that the first unit's (or any other unit's) transmission and/or the acknowledgement interval occur at predetermined (*i.e.*, fixed) intervals. Moreover, all units share the same radio frequency. *See id.* at col. 3, lines 43-48.

17. Kubler

Kubler discloses a communication network comprising a plurality of mobile network devices, a stationary network device, a wireless network, a hardwired network and a telephone. Kubler, col. 3, ll. 47-53. Each mobile network device uses the wireless network to selectively exchange voice and data packets with other mobile network devices. *Id.* Half- and full-duplex communications are contemplated. *See* col. 3, ll. 31-53.

18. Dobbins

Dobbins discloses an apparatus and method wherein multiple router interfaces are assigned the same IP network address, creating an IP work group. Dobbins, abstract. Dobbins discusses broadcast and IP address. *See* col. 4, l. 5-65.

19. Orsic

Orsic disclose a wired network 10, for example, the Global Internet., that links fixed, i.e., stationary, terminal host (H) users 12 and a number of network base stations (BS) 14 with one another. Orsic, col. 2, ll. 13-20. Each of the base stations 14 has an associated cell 16 within which

one or more mobile terminal/hosts (T/H) 18 may enter to establish a wireless link with the base station, and, thus, gain access to the wired network 10. *Id.*

20. Choi

Choi discloses a transmission frame that includes either a control packet or a data packet, along with certain preamble and synchronization information. Choi, col. 6, ll. 15-17.

21. Mauney

Mauney discloses an enhanced wireless handset, including direct handset-to-handset communication mode. *See* Mauney, abstract.

B. Haim Or Kashi Fails To Disclose All The Recited Limitations Of Claims 1-18, 20-45, 47-61, 64-71, 74-77, 80, And 81

Appellant respectfully submits that Haim or Kashi does not disclose each and every element of claims 1-18, 20-45, 47-61, 64-71, 74-77, 80, and 81.

As stated in MPEP § 2131, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed Cir. 1987).

1. Haim Fails To Disclose Predetermined Forward And Reverese Channel Intervals As Claimed

Independent claim 1 is repeated, with emphasis added, as follows:

1. A system, comprising:

a base station that provides a forward channel signal; and

a plurality of remote stations, wherein each remote station monitors said forward channel signal, monitors a reverse channel within an assigned period of time in a clear channel assessment interval, and provides a reverse channel signal when said reverse channel is clear within said assigned period of time, wherein said clear channel assessment interval is partitioned into periods of time and each of said periods of time is assigned to one of said plurality of remote stations, and said forward channel signal is provided during a predetermined forward channel interval and said reverse channel signal is provided during a predetermined reverse channel interval.

Haim fails to disclose "said forward channel signal is provided during a predetermined forward channel interval and said reverse channel signal is provided during a predetermined reverse channel interval" as claimed. Emphasis added. A "predetermined reverse channel interval," for example, is a time interval allotted (i.e., set aside or fixed in time during each cycle) for one or more remote stations to transmit data to the base station. *See, e.g.*, Specification at page 7, lines 7-19. Haim's admitted prior art merely describes a basic Time Division Multiple Access (TDMA) technique and makes no mention whatsoever that the communications intervals for the base station and the remote units are predetermined, e.g., cyclical in nature and occur at predetermined (or fixed) time intervals in a cycle. Rather, in the global interrogation technique that Haim describes, remote units do not transmit until they are interrogated, i.e., polled, by the base station, i.e., the base station requests at varying times that the remote units send any data that they might have. In other words, the remote units in Haim do not transmit until they are told to do so by the base station. Because the remote units in Haim can not transmit until they are interrogated at various random times, they are clearly not providing a signal during a predetermined (i.e., fixed) reverse channel interval.

The Detailed Description of Haim or Kashi does not teach predetermined forward and reverse channel intervals as well. Haim Kashi's actual invention as illustrated in either Figure 5 or 6 requires that each RTU is capable of receiving and understanding the data transmitted from every other RTU, so that a comparison of priority numbers can be performed. This comparison is then used to calculate a period, only at the expiration of which, does each RTU assess whether or not the transmitting channel is free. *See* Kashi at col. 2, lines 26-40; col. 4, line 22 to col. 5, line 54; and Fig. 5. If the channel is occupied by another RTU at that time, that RTU repeats the comparison and calculation steps, and then waits again before further monitoring. As such, the time at which channel monitoring and assessment, and then transmission if the channel is clear, begins for a Kashi RTU is at least dependent on or determined by the expiration, i.e., duration, of the central unit's transmission and the priority values received from other RTUs attempting to transmit. Therefore, monitoring and assessment, and then transmission, will occur at varying unassigned (not fixed or predetermined) times. In sum, nowhere in Haim Kashi's disclosures does it teach or suggest predetermined forward and reverse channel intervals as recited in claim 1.

Independent claims 32, 55, 68, 69, and 76 recite similar, if not identical limitations as those noted above with respect to claim 1. Accordingly, Appellant submits that the rejection of claims 1, 32, 55, 68, 69, and 76, and all claims dependent therefrom, i.e., claims 15-18, 24, 42-45, 50, 66, 74, and 80 are unsustainable.

2. Haim Fails To Disclose Separate Forward And Reverse Channels As Claimed

Moreover, Haim fails to disclose separate forward and reverse channels as recited in claims 1, 32, 55, 68, 69, and 76. In fact, Haim explicitly states that his "invention relates to a communication system comprising at least one central station and a number of remote units arranged for communication over a common communications channel." *See* Haim at page 1, lines 6-

8. Separate forward and reverse channels are not taught or suggest in either the admitted prior art section or the detailed description section of Haim.

3. Examiner's Reasoning Is Improperly Pieced Together From Haim Kashi's Admitted Prior Art And Haim Kashi's Actual Invention

Moreover, the Examiner's reasoning is improperly pieced together from Haim Kashi's prior art section and Haim Kashi's actual invention. Although the teachings of a single reference generally form the basis of an anticipation rejection, it is improper to combine the background art with the actual invention set forth, which overcome the deficiencies of the background art, especially when the reference relied upon teaches away from such a combination. In the rejection of claims 17, 18, 44, and 45, the Examiner attempts to reach the claimed invention by relying on a prior art SCADA system described in Haim Kashi's background section combined with Haim Kashi's actual invention described at page 8, lines 25-30 of "Haim." *See* Office Action, page 3 *discussing* claims 17, 18, 44, and 45. Thus, the anticipation rejection is based on two separate and distinct inventions even though they are described in a single reference. It should be pointed out that Haim Kashi's actual invention is an alternative and improved communications technique to the global interrogation technique described in the background section, which Haim Kashi expressly describes as inefficient and problematic. *See, e.g.*, Haim at page 2, lines 8-18 ("The arrangement described above is wasteful of channel time . . . . Where there are many RTU's in a single system, there is a large amount of overhead transmission and it is a problem that the cycle time for interrogation of all RTU's can be quite long. There is a need for an improved method of operation of the communication systems.") Hence, Haim Kashi teaches away from combining his invention with the prior art SCADA system described. *See also* § VIII.C.2.c, *infra.* Rather than applying an anticipation test, the Examiner must apply an obviousness standard test to the combination of these distinct techniques, wherein a proper motivation to combine or modify is required and secondary considerations, such as the above-noted disclosure that teaches away from making such a combination, must be considered.

C. Haim Kashi Fails To Teach Or Suggest All Of The Claim Limitations Recited In Dependent Claims 2, 3, 5-7, 25, 33-35, 40, 56, 57, 61, 70, 71, And 77

Haim Kashi fails to teach or suggest all of the claim limitations recited in dependent claims 2, 3, 5-7, 25, 33-35, 40, 56, 57, 61, 70, 71, and 77 as well.

As stated in MPEP § 2143.01, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

1. Claims 2, 3, 5-7, 25, 33-35, 40, 56, 57, 61, 70, 71, And 77 Depend From Nonobvious Independent Claims

Haim or Kashi fails to teach or suggest all limitations recited in independent claims 1, 32, 55, 68, 69, and 76. *See* § VIII.B.1 and VIII.B.2, *supra.* Therefore, these claims are nonobvious, and any claims dependent therefrom, e.g., claims 2, 3, 5-7, 25, 33-35, 40, 56, 57, 61, 70, 71, and 77, are also nonobvious.

2. The Examiner's Line Of Reasoning For Combining Haim Kashi's Actual Invention With The Prior Art SCADA System Is Unsound

In order to support a § 103 rejection based on a combination of references, the Examiner must provide a sufficient motivation for making the relevant combinations. *See* M.P.E.P. §§ 2142 and 2143.01; *see also In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998) ("When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references."). It is well-settled that an Examiner can "satisfy [the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness] only by showing some *objective teaching* in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) (emphasis added); *see also In re Lee*,

277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir 2002) ("'deficiencies of the cited references cannot be remedied by the Board's general conclusions about what is 'basic knowledge' or 'common sense'"). As with rejections based on the modification of a single reference, "[b]road conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence [of a motivation to combine]'" and thus do not support rejections based on combining references. *In re Dembiczak*, 175 F.3d at 999, 50 USPQ2d at 1617. Without objective evidence of a motivation to combine, the obviousness rejection is the "essence of hindsight" reconstruction, the very "syndrome" that the requirement for such evidence is designed to combat, and without which the obvious rejection is insufficient as a matter of law. *Id.* at 999, 50 USPQ2d at 1617-18

The Examiner asserts that all of the numerous limitations recited in claims 2, 3, 5-7, 25, 33-35, 40, 56, 57, 61, 70, 71, and 77, which are admitted to be missing in the prior art section of Haim, can be found in the Detailed Description of Haim. *See* Office Action at page 4. The Examiner then opines:

> Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method for encoding the information such packet [*sic*] having a priority and address before transmitting between the central and remote units as disclosed by Haim's improved system into Haim's admitted prior arts. The motivation would have been to provide a security [*sic*] for transmitted data.

This line of reasoning is unsound for multiple reasons.

a) Poor Grammar And Sentence Structure

First, the Examiner's line of reasoning is nonsensical due to the poor grammar and sentence structure. A reasonable person, let alone one of ordinary skill in the art, can not understand the reasoning attempted to be conveyed in the Office Action.

b) All Claim Limitations Are Not Addressed

Second, the Examiner's line of reasoning fails to address all the limitations supposedly provided by Kashi's actual invention. Certainly, the limitations of claims 2, 3, 5-7, 25, 33-35, 40, 56, 57, 61, 70, 71, and 77 can not all be distilled into a simple phrase, such as the Examiner's "a method

for encoding the information such packet having a priority and address." There are numerous limitations (too numerous to identify here) found in the claims that are not addressed by the Examiner.

c) Haim Teaches Away From Making The Proposed Combination

Haim Kashi's actual invention is an alternative system to that described in the background section. *See, e.g.*, Haim at page 2, lines 8-18 ("The arrangement described above is wasteful of channel time . . . . Where there are many RTU's in a single system, there is a large amount of overhead transmission and it is a problem that the cycle time for interrogation of all RTU's can be quite long. There is a need for an improved method of operation of the communication systems.") Accordingly, Haim Kashi would not combine an inefficient global interrogation system with his invention.

In view of Haim Kashi's teachings, one of ordinary skill in the art would not have been motivated to make the Examiner's proposed combination.

D. Serfaty Fails To Cure The Deficiencies of "Haim" or "Kashi"

"Haim" or "Kashi," either taken alone or in combination with Serfaty, fails to teach or suggest all claim limitations recited in independent claims 1, 32, 55, 68, 69, and 76. In sum, Serfaty fails to cure the deficiencies of "Haim" or "Kashi."

1. Serfaty Fails To Disclose Predetermined Forward And Reverse Channel Intervals, And Separate Forward And Reverse Channels As Claimed

Haim or Kashi fail to teach or suggest "said forward channel signal is provided during a predetermined forward channel interval and said reverse channel signal is provided during a predetermined reverse channel interval" and separate forward and reverse channels as claimed. *See* § VIII.B.1 and VIII.B.2, *supra.*

Serfaty does not teach or suggest these limitations either. Instead, Serfaty discloses an acknowledgment interval featuring the use of time slots in which a unit waits to "see" that the

channel is free to send an acknowledgement. Serfaty at col. 5, ll. 9-32. This acknowledgment interval is triggered by the transmission of a first unit (unit A). *See id.* at col. 4, 36-43. Serfaty does not disclose that the first unit's (or any other unit's) transmission and/or the acknowledgement interval occur at predetermined (i.e., fixed) times. Moreover, all units share the same radio frequency. *See id.* at col. 3, lines 43-48. Thus, Kashi in view of Serfaty, as well as Haim by itself, fail to teach or suggest all limitations recited in independent claims 1, 32, 55, 68, 69, and 76.

At least based on the above reasoning, the obviousness rejections in view of Serfaty of independent claims 1, 32, 55, 68, 69, and 76, and all claims dependent therefrom, is improper.

2. The Modification Of Kashi To Include Serfaty's Acknowledgment Interval Is Improper

This rejection fails to satisfy the Examiner's burden to establish a *prima facie* case of obviousness as there is no objective evidence of a motivation to modify/combine provided that would lead one of ordinary skill in the art to include Serfaty's acknowledgment interval into Kashi's system. Furthermore, the Examiner's hypothesized motivation to support this modification is not sufficient because the basis for this hypothesis is fundamentally unsound. Appellant submits that Kashi clearly teaches away from the inclusion of an acknowledgement protocol. Moreover, the inclusion of an acknowledgment protocol would change the principle of operation of Kashi.

a) There Is No Objective Evidence Of A Motivation To Modify Kashi In View Of Serfaty

There is no showing of any objective teaching to modify Kashi in view of Serfaty. With respect to independent claims 1, 32, 55, 68, 69, and 76, the Office Action merely states "it would have been obvious to one of ordinary skill in the art at the time [that] the invention was made to apply a method and system for dividing a sensing interval time into a plurality of time slots wherein each time slot assigned to each mobile unit as disclosed by Serfaty's system and method into Kashi's system and method" as the "motivation would have been to reduce [collisions] and improve the throughput of the system." This broad, conclusory statement is not sufficient, under the controlling

authorities set forth above, to justify combining the teachings of these two references. There is no showing that either of the applied references, or any other prior art, even remotely suggests such a combination/modification.

b) The Examiner's Hypothesized Motivation To Combine Is Fundamentally Unsound

The Examiner's hypothesized motivation to combine the cited references in order "to reduce [collisions] and improve the throughput of the system" is fundamentally unsound. Particularly, addition of Serfaty's acknowledgment interval would not reduce the number of collisions, *i.e.*, interference, within Kashi's system as its inclusion would be redundant to the priority/polling allocation method already provided for by Kashi. Kashi discloses the use of a complicated priority algorithm to allocate transmission time periods, during which a particular station can transmit under optimal conditions information without interference from other stations. *See* § VIII.A.15, *supra.* Therefore, inclusion of Serfaty's acknowledgment interval would not reduce transmission interference as Kashi has already eliminated such. More importantly, incorporating an acknowledgment interval into Kashi would have a negative impact on the overall throughput of the system. Serfaty requires that the remote units send an acknowledgment upon receiving a message from another unit. Serfaty at col. 4, ll. 29-31. Each and every remote unit sends an acknowledgment after receiving a message. *Id.* at col. 4, ll. 29-52. Thus, precious time for transmitting information is wasted as every station must send an acknowledgment after each message, thereby creating additional overhead and wasting time that could be allocated for the normal transmission interval. Thus, the proposed inclusion of Serfaty's acknowledgment interval would reduce (as opposed to increase or improve) the throughput of the Kashi's system.

c) Kashi Clearly Teaches Away From The Inclusion Of Serfaty's Acknowledgment Interval

Kashi states that channel time is a critical, valuable, and scarce resource in a radio communications system. Kashi at col. 1, ll. 55-61. Where there are many remote transmitting

stations in a single system, *large amounts of overhead transmissions should be avoided*. *Id.* at col. 1, ll. 62-67 (Emphasis added.). The inclusion of Serfaty's acknowledgment interval in Kashi would create additional overhead and decrease communication channel time. *See* § VIII.D.2.b, *supra.* These are two results that Kashi clearly attempts to avoid.

d) The Inclusion Of Serfaty's Reservation Protocol Would Change The Principle Of Operation Of Kashi

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. M.P.E.P. § 2143.02 (citing *In re Ratti*, 270 F.2d 810,123 USPQ 349 (CCPA 1959)).

Kashi discloses the use of a complicated priority algorithm to allocate transmission time periods to remote stations. *See* § VIII.A.15, *supra.* These transmission time periods are at least dependent on the priority calculations. Serfaty discloses the use of a reservation protocol to allocate transmission time periods to remote stations. *See*, Argument § A.5, *supra.* Inclusion of Serfaty's acknowledgment interval and communications protocol would fundamentally alter the principle (and only) way Kashi's system allocates transmission time (bandwidth). Appellant submits that a communication system can either implement Kashi's priority algorithm or Serfaty's communications protocol, but not both. Therefore, modifying Kashi's system to include Serfaty's communications protocol would change the principle of operation of Kashi.

Appellant notes that the Examiner has yet to respond to the contention that modifying Haim Kashi to include an acknowledgment interval as allegedly provided by Serfaty, or any other reference for that matter, changes the principle of operation of Kashi's self-sufficient system. *See* Appeal Brief of June 20, 2003, Response of February 23, 2004, Response of November 5, 2004, and Office Action. Overlooking such is contrary to well-established patent law. Moreover, the Examiner can not overlook that combining Serfaty's acknowledgement interval into Kashi's system

is not only redundant, but contrary to Kashi's stated concern of wasting critical bandwidth (*see* Kashi, col. 1, ll. 62-67).

E. The Further Modification Based On Kubler As Applied To Claims 4, 26-29, 41, 51, 52, 67, 75, And 81 Is Improper

The alleged modification of Haim, or Kashi and Serfaty, in further view of Kubler with respect to claims 4, 26-29, 41, 51, 52, 67, 75, and 81 is improper at least because the underlying modification of Haim, or the combination of Kashi and Serfaty's acknowledgment interval is improper. *See* § VIII.C and VIII.D, *supra.* In addition, the Examiner's burden to establish a *prima facie* case of obviousness has not been met in the Office Action as it fails to provide legitimate objective evidence of a motivation to incorporate the alleged teaching of Kubler.

Appellant submits that there is no showing of any objective teaching to make such a combination. The Office Action merely states "it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the digitized voice and data for transmitting between the base and remote station" as the "motivation would have been to integrate a wireless network with a wireline network such as Internet and turn the Internet into a reliable telecommunication network." This broad, conclusory statement is not sufficient, under the controlling authorities set forth above, to justify combining the teachings of the references. There is no showing that any of the applied references, or any other prior art, even remotely suggests such combinations in view of Kubler.

F. The Further Modification Based On Dobbins As Applied To Claims 8-11, 36, 37, And 60 Is Improper

The alleged modification of Haim, or Kashi and Serfaty, in further view of Dobbins with respect to claims 8-11, 36, 37, and 60 is improper at least because the underlying modification of Haim, or the combination of Kashi and Serfaty's acknowledgment interval is improper. *See* § VIII.C and VIII.D, *supra.* In addition, the Examiner's burden to establish a *prima facie* case of obviousness

has not been met in the Office Action as it fails to provide legitimate objective evidence of a motivation to incorporate the alleged teaching of Dobbins.

Appellant submits that there is no showing of any objective teaching to make such a combination. The Office Action merely states "it would have been obvious to one of ordinary skill in the art at the time [that] the invention was made to assign an address to a remote unit in order to route the packets in the system" as the "motivation would have been to obtain an efficiency [*sic*] system." This broad, conclusory statement is not sufficient, under the controlling authorities set forth above, to justify combining the teachings of the references. There is no showing that any of the applied references, or any other prior art, even remotely suggests such combinations in view of Dobbins.

G. The Further Modification Based On Orsic As Applied To Claims 12-14, 38, 39, 58, and 59 Is Improper

The alleged modification of Haim, or Kashi and Serfaty, in further view of Orsic with respect to claims 12-14, 38, 39, 58, and 59 is improper at least because the underlying modification of Haim, or the combination of Kashi and Serfaty's acknowledgment interval is improper. *See* § VIII.C and VIII.D, *supra.* In addition, the Examiner's burden to establish a *prima facie* case of obviousness has not been met in the Office Action as it fails to provide legitimate objective evidence of a motivation to incorporate the alleged teaching of Orsic.

Appellant submits that there is no showing of any objective teaching to make such a combination. The Office Action merely states it would have been obvious to one of ordinary skill in the art at the time the invention was made "to assign a different address to each remote to different zone [*sic*] having an Internet subnetwork" as the "motivation would have been to easily locate the remote station in the zones." This broad, conclusory statement is not sufficient, under the controlling authorities set forth above, to justify combining the teachings of the references. There is

no showing that either of the applied references, or any other prior art, even remotely suggests such combinations in view of Orsic.

H. The Further Modification Based On Choi As Applied To Claims 20-22, 30, 31, 47, 48, 53, 54, And 64 Is Improper

The alleged modification of Haim, or Kashi and Serfaty, in further view of Choi with respect to claims 20-22, 30, 31, 47, 48, 53, 54, and 64 is improper at least because the underlying modification of Haim, or the combination of Kashi and Serfaty's acknowledgment interval is improper. *See* § VIII.C and VIII.D, *supra.* In addition, the Examiner's burden to establish a *prima facie* case of obviousness has not been met in the Office Action as it fails to provide legitimate objective evidence of a motivation to incorporate the alleged teaching of Choi.

Appellant submits that there is no showing of any objective teaching to make such a combination. The Office Action merely states it would have been obvious to one of ordinary skill in the art at the time the invention was made "to synchronize the base station and remote station by broadcasting a control packet to the mobile" as the "motivation would have been to adjust a clock of the remote station to coincide with the base station." This broad, conclusory statement is not sufficient, under the controlling authorities set forth above, to justify combining the teachings of these references. There is no showing that either of the applied references, or any other prior art, even remotely suggests such combinations in view of Choi.

I. The Further Modification Based On Mauney As Applied To Claims 23, 49, And 65 Is Improper

The alleged modification of Haim, or Kashi and Serfaty, in further view of Mauney with respect to claims 23, 49, and 65 is improper at least because the underlying modification of Haim, or the combination of Kashi and Serfaty's acknowledgment interval is improper. *See* § VIII.C and VIII.D, *supra.* In addition, the Examiner's burden to establish a *prima facie* case of obviousness has not been met in the Office Action as it fails to provide legitimate objective evidence of a motivation to incorporate the alleged teaching of Mauney.

Appellant submits that there is no showing of any objective teaching to make such a combination. The Office Action merely states it would have been obvious to one of ordinary skill in the art at the time the invention was made "to apply IP into a multiple access system as disclosed by Mauney" as the "motivation would have been to reduce the cost of a telephone call." This broad, conclusory, and nonsensical statement is not sufficient, under the controlling authorities set forth above, to justify combining the teachings of these references. There is no showing that either of the applied references, or any other prior art, even remotely suggests such combinations in view of Mauney.

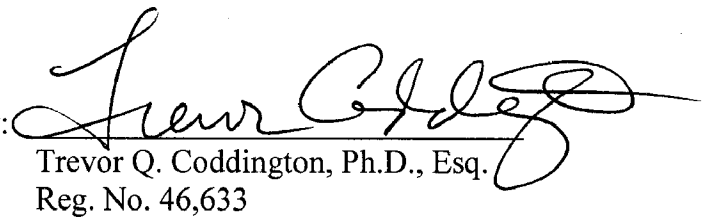
VIII. CONCLUSION

In view of the foregoing, appellant respectfully requests that the Board reverse the prior art rejections set forth in the Office Action, and allow all of the pending claims.

Respectfully submitted,

PAUL, HASTINGS, JANOFSKY & WALKER LLP

April 6, 2006

By: 
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APPENDIX A - Pending Claims

CLAIMS

1. (previously presented) A system, comprising:

a base station that provides a forward channel signal; and

a plurality of remote stations, wherein each remote station monitors said forward channel signal, monitors a reverse channel within an assigned period of time in a clear channel assessment interval, and provides a reverse channel signal when said reverse channel is clear within said assigned period of time, wherein said clear channel assessment interval is partitioned into periods of time and each of said periods of time is assigned to one of said plurality of remote stations, and said forward channel signal is provided during a predetermined forward channel interval and said reverse channel signal is provided during a predetermined reverse channel interval.

2. (previously presented) The system of claim 1, wherein said base station receives information encoded on said reverse channel signal and wherein each remote station receives information encoded on said forward channel signal.

3. (previously presented) The system of claim 1, wherein said forward channel signal and said reverse channel signal include data packets.

4. (previously presented) The system of claim 3, wherein said data packets include digitized voice and data.

5. (previously presented) The system of claim 1, wherein said forward channel includes an address.

6. (previously presented) The system of claim 5, wherein each remote station is assigned a unique remote station address and wherein each remote station accepts information encoded on said forward channel signal when said address of said forward channel signal matches said assigned unique remote station address.

7. (previously presented) The system of claim 5, wherein a remote station address is assigned a priori to said remote station.

8. (previously presented) The system of claim 5, wherein said address is a broadcast address.

9. (previously presented) The system of claim 5, wherein said address is a semi-broadcast address.

10. (previously presented) The system of claim 5, wherein said address corresponds with an Internet Protocol address.

11. (previously presented) The system of claim 5, wherein said address is an Internet Protocol address.

12. (previously presented) The system of claim 5, wherein one remote station is assigned a first remote station address from a first set of addresses and a second remote station is assigned a second remote station address from a second set of addresses.

13. (previously presented) The system of claim 12, wherein said first set of addresses form a first zone and said second set of addresses form a second zone.

14. (previously presented) The system of claim 5, wherein each remote station is assigned a remote station address from a set of addresses and said set of addresses form an Internet sub-network.

15. (previously presented) The system of claim 1, wherein said assigned period of time is a predetermined dwell time and wherein each of said remote stations monitor said clear assessment channel interval during said predetermined dwell time.

16. (previously presented) The system of claim 15, wherein each of said dwell times is of equal duration.

17. (previously presented) The system of claim 15, wherein each remote station is dynamically assigned a dwell time.

18. (previously presented) The system of claim 17, wherein said dwell times are assigned to said plurality of remote stations in a round robin fashion.

19. (canceled)

20. (currently amended) The system of claim [[19]] 1, further comprising guard times among said forward channel interval, said reverse channel interval, and said clear channel assessment interval.

21. (previously presented) The system of claim 20, wherein said guard times are positioned at the beginning and end of said forward channel interval, said reverse channel interval, and said clear channel assessment interval.

22. (previously presented) The system of claim 20, wherein said guard times are positioned at the beginning and end of said forward channel interval and at the end of said reverse channel interval and said clear channel assessment interval.

23. (previously presented) The system of claim 1, wherein the system is an Internet Protocol Multiple Access environment.

24. (previously presented) The system of claim 1, wherein said forward channel signal and said reverse channel signal are wireless signals.

25. (previously presented) The system of claim 22, wherein said forward channel signal and said reverse channel signal are modulated signals each having carrier signals with a frequency of approximately 2 GHz.

26. (previously presented) The system of claim 1, wherein said forward channel signal and said reverse channel signal are each electrical signals transmitted in an electrical medium.

27. (previously presented) The system of claim 1, wherein said forward channel signal and said reverse channel signal are each optical signals transmitted in an optical medium.

28. (previously presented) The system of claim 1, wherein said forward channel signal and reverse channel signal are half-duplex signals.

29. (previously presented) The system of claim 1, wherein said forward channel signal and reverse channel signal are full-duplex signals.

30. (previously presented) The system of claim 1, wherein said base station synchronizes with a portion of said plurality of remote stations.

31. (previously presented) The system of claim 28, wherein said base station uses broadcast control packets for synchronization.

32. (previously presented) A method for a single-point to a fixed multi-point system having a base station and a plurality of remote stations, the method comprising the step of:

transmitting from the base station a forward channel signal;

monitoring for said forward channel signal at each of the plurality of remote stations; and

monitoring a reverse channel at each of the plurality of remote stations, wherein each of the plurality of remote stations monitors said reverse channel within an assigned period of time in a clear channel assessment interval, wherein said clear channel assessment interval is partitioned into periods of time and each of said periods of time is assigned to one of said plurality of remote stations, and said forward channel signal is provided during a predetermined forward channel interval and said reverse channel signal is provided during a predetermined reverse channel interval,

if said reverse channel is clear during said assigned period of time associated with one of the plurality of remote stations and said one of the plurality remote stations has information

to send to the base station, transmitting a reverse channel signal from said one of the plurality of remote stations.

33. (previously presented) The method of claim 32, wherein said forward channel signal has data information and address information.

34. (previously presented) The method of claim 33, further comprising the steps of assigning a unique remote station address to each of the plurality of remote stations and accepting said data information at one of the plurality of remote stations when said address matches an unique address of said one of the plurality of remote stations.

35. (previously presented) The method of claim 34, wherein said step of assigning unique remote addresses is done a priori.

36. (previously presented) The method of claim 33, wherein said address information is a broadcast address.

37. (previously presented) The method of claim 33, wherein said address information is an Internet Protocol address.

38. (previously presented) The method of claim 33, further comprising the steps of assigning a first remote station address from a first set of addresses to one of the plurality of remote stations and assigning a second remote station address from a second set of addresses to another of the plurality of remote stations.

39. (previously presented) The method of claim 38, wherein said first set of addresses form a first zone and said second set of addresses form a second zone.

40. (previously presented) The method of claim 33, wherein said forward channel signal and said reverse channel signal include data packets.

41. (previously presented) The method of claim 40, wherein said data packets include digitized voice and data.

42. (previously presented) The method of claim 32, wherein each assigned period of time is a predetermined dwell time.

43. (previously presented) The method of claim 42, wherein each of said dwell times is of equal duration.

44. (previously presented) The method of claim 42, further comprising the step of dynamically assigning dwell times to each of the plurality of remote stations.

45. (previously presented) The method of claim 44, wherein said dwell times are assigned in a round robin fashion.

46. (canceled)

47. (previously presented) The method of claim 32, further comprising the step of providing guard times among said forward channel interval, said reverse channel interval, and said clear channel assessment interval.

48. (previously presented) The method of claim 47, wherein said guard times are positioned at the beginning and end of said forward channel interval, said reverse channel interval, and said clear channel assessment interval.

49. (previously presented) The method of claim 32, wherein the system is used in an Internet Protocol Multiple Access environment.

50. (previously presented) The method of claim 32, wherein said forward channel signal and said reverse channel signal are wireless signals.

51. (previously presented) The method of claim 32, wherein said forward channel signal and reverse channel signal are half-duplex signals.

52. (previously presented) The method of claim 32, wherein said forward channel signal and reverse channel signal are full-duplex signals.

53. (previously presented) The method of claim 32, further comprising the step of synchronizing the base station with the plurality of remote stations.

54. (previously presented) The method of claim 53, wherein broadcast control packets are used for synchronization.

55. (previously presented) A single-point to a fixed multi-point system, comprising:

a base station for transmitting a forward channel signal; and

a plurality of remote stations, each remote station monitoring said forward channel signal, monitoring a reverse channel within an assigned dwell time in a clear channel assessment interval, and transmitting a reverse channel signal after detecting that said reverse channel is clear, wherein said clear channel assessment interval is partitioned into dwell times, each dwell time assigned to one of said plurality of remote stations, said forward channel signal provided during a predetermined forward channel interval, and said reverse channel signal provided during a predetermined reverse channel interval.

56. (previously presented) The system of claim 55, wherein said forward channel signal has data information and address information.

57. (previously presented) The system of claim 56, wherein each remote station has a unique remote station address and each remote station accepts said data information when said address information matches said unique address.

58. (previously presented) The system of claim 56, wherein one remote station has a first remote station address from a first set of addresses and a second remote station has a second remote station address from a second set of addresses.

59. (previously presented) The system of claim 58, wherein said first set of addresses form a first zone and said second set of addresses forms a second zone.

60. (previously presented) The system of claim 56, wherein said address information is a broadcast address.

61. (previously presented) The system of claim 56, wherein said forward channel signal and said reverse channel signal include data packets.

62-63. (cancelled)

64. (previously presented) The system of claim 55, further including guard times among said forward channel interval, said reverse channel interval, and said clear channel assessment interval.

65. (previously presented) The system of claim 55, wherein the system is used in an Internet Protocol Multiple Access environment.

66. (previously presented) The system of claim 55, wherein said forward channel signal and said reverse channel signal are wireless signals.

67. (previously presented) The system of claim 55, wherein said forward channel signal and reverse channel signal are full-duplex signals.

68. (previously presented) A method of communicating with a station, comprising the steps of:

monitoring a forward channel;

monitoring a reverse channel within an assigned predetermined dwell time within a clear channel assessment interval, wherein said clear channel assessment interval is partitioned into a number of dwell times, each dwell time assigned to one of a number of remote stations, said number of dwell times being equal to said number of remote stations; and

transmitting a reverse channel signal after detecting that said reverse channel is clear during said predetermined dwell time, wherein said forward channel signal is provided during a predetermined forward channel interval and said reverse channel signal is provided during a predetermined reverse channel interval.

69. (previously presented) A station comprising:

a monitor for monitoring a forward channel signal and monitoring a reverse channel within a clear channel assessment interval, wherein said clear channel assessment interval is partitioned into at least two dwell times, one of said dwell times is assigned to said station with a remainder of said dwell times assigned to other stations, said monitor monitoring said reverse channel only within said dwell time assigned to said station; and

a transmitter for transmitting a reverse channel signal after said monitor detects that said reverse channel is clear during said dwell time, wherein said forward channel signal is provided during a predetermined forward channel interval and said reverse channel signal is provided during a predetermined reverse channel interval.

70. (previously presented) The station of claim 69, wherein said forward channel signal has data information and address information.

71. (previously presented) The station of claim 70, further comprising:

a unique station address, wherein said station accepts said data information when said address information matches said unique station address.

72-73. (cancelled)

74. (previously presented) The station of claim 69, wherein said forward channel signal and said reverse channel signal are wireless signals.

75. (previously presented) The station of claim 69, wherein said forward channel signal and reverse channel signal are full-duplex signals.

76. (previously presented) A base station comprising:

a transmitter for transmitting a forward channel signal; and

a receiver for receiving a reverse channel signal from one of a number of remote stations after said remote station detects that a reverse channel is clear during a dwell time assigned to said remote station in a clear channel assessment interval, wherein said clear channel assessment interval is partitioned into a number of dwell times, said number of dwell times equal to said number of remote stations, each dwell time assigned to one remote station, said forward channel signal provided during a predetermined forward channel interval, said reverse channel signal provided during a predetermined reverse channel interval, and said clear channel assessment interval occupies a time between said forward and reverse channel intervals.

77. (previously presented) The station of claim 76, wherein said forward channel signal has data information and remote station address information.

78-79. (cancelled)

80. (previously presented) The station of claim 76, wherein said forward channel signal and said reverse channel signal are wireless signals.

81. (previously presented) The station of claim 76, wherein said forward channel signal and reverse channel signal are full-duplex signals.